

What is claimed is:

1. A method for assessing toxicity and toxicology of a substance, comprising:  
exposing a set of at least two genes to the substance;  
5 monitoring the response of each gene in the set of genes to the substance;  
analyzing the variance of the response to the substance for each gene using  
contrast analysis;  
constructing a summary score for each gene in the set of genes;  
performing a logistic regression analysis upon the summary scores; and  
10 using the results of the logistic regression analysis to provide a predictive model  
regarding the toxicity and toxicology of the substance.